

No 6
Dec 5th 1820
23 North 3^d
An

Jan 17

Printed March 5th 1827
E. W. L. H.

Inaugural Dissertation
on
Cynanche Trachealis
by
Albert Sargeant
of
New Jersey
Nov. 1821.

Monday at 10 o'clock

1820
1821
1822

1823

1824

1825

1826

1827

A variety of names has been given to this disease, as Suffocatio Stridula, Angina polyposa, asthma infantum, Cynanche Stridula, Angina epidemica, morbus strangulatorius, and it is commonly called Croup, Hoarseness, the hoarseness of the ligaments, or lungs, the croup, or Hoarseness.

The best nosological title, and the one most indicative of the disease, is Tracheitis.

It is not necessary that I should inquire whether this disease was known by the ancients, or is one of modern origin. It is well known to be one, of but too frequent occurrence, in this as well as, in other Countries, and one of but too frequent danger.

This disease seems chiefly to be confined to child-hood, and is most frequent in infancy, or before the fifth, and sixth year. It is affirmed by Huxley, that it seldom attacks infants, before they are weaned, and that there is no instance

The first of the year
was a very cold one
and the snow lay deep
on the ground. The
frost was very severe
and the wind was
very strong. The
people were very
dressed in warm
clothes. The
children were
very happy
and played
in the snow.
The old people
were very
kind to the
children and
gave them
many presents.
The children
were very
grateful to
the old people
and loved them
very much.

of its having attacked a child above the 12th year.
 This as a general rule may be correct, but there
 are several exceptions. Doct Duveroy says, "We have
 seen it in its most formidable shape in children at
 the breast, and we have witnessed death from it
 in the adult. Professor Chapman, also, in his
 lectures, mentions, that he has known it to at-
 tack them within the month, and also after the
 age of puberty. He cites the cases of two ladies
 of this city, who have had repeated attacks of
 it, and that the same is transmitted to their
 children. Whym in his essays also says, "that
 Group chiefly prevails in children from a short
 period after birth, until puberty, attacking its-
 self to particular families," and further says
 "I have heard of no example of this disease af-
 ter the fifteenth year," which he supposes is owing
 to the change the constitution undergoes
 at this period of life, and, perhaps, in a more

[Faint, illegible handwriting in cursive script, likely a historical document or manuscript.]

particular manner, "the change which the upper part of the wind-pipe undergoes." How far this latter assertion is true, I will leave for others to judge, but it is both ingenious and probable.

This disease generally affects those of a "florid complexion, and enjoying high health, and especially those inclined to be fat before two years*"

It is found to be more prevalent in some places than in others, particularly near the sea coast, where the air is loaded with moisture, and in many places, so as to preclude the raising of children. It likewise arises from the influence of a cold, moist, and stercoraceous atmosphere, hence it prevails most generally in the spring and autumn; and almost any sudden transition, which shall too suddenly check perspiration, will produce it. This is not a contagious disease but it sometimes prevails epidemically,

Croup has arisen from worms, and scurvy in

* See Diseases in children.

the intestines. Profr. Chapman, in his lectures, mentions the case of a child being immediately relieved by the discharge of worms. It also arises from oppression of the stomach from indigestible food.

This disease has been divided into Spasmodic and Inflammatory. For the ideas, which I have on this subject, I am much indebted to the distinguished Professor, Dr. Chapman; he, considering, that, in all cases, when it suddenly attacks, it must partake of the nature of Spasms; for time says he, is required to induce inflammation, which consist in an altered action of the vessels of a part, effected comparatively by a slow process; and no cause promotes it quicker than Spasmodic constriction; and indeed the early symptoms correspond with this pathology, and dissections, fully confirm it, showing when death suddenly takes place, no existing marks

of inflammation. But when the disease spreads up-
proachis, or is the effect of inflammation of other parts
extending to the trachea, as sometimes happens, in
measles, scarlet fever, and most of the contagious
affections, it is of a contrary character, and post
mortem examinations have revealed such appear-
ances, as might have been anticipated.

D.^r Does not believe in the presence of
spasm, in either the forming, or formed stages of
this complaint. He thinks it may and proba-
bly does take place in the last or "congestive
stage," as he denominates it. The distinction
however leads to no practical difference, whether
or the other, depletory measures must be used.

It attacks in various ways. It commonly
comes on at night, about two or three o'clock in the
morning, and sometimes without any premonition.

The child wakes up with a hoarse, dry, sti-
citous cough, which is peculiar to the disease.



and is compared to the barking of a dog, or the crowing of a cock. Attendant with this, there is a difficulty of breathing, which is very distressing to the patient, threatening in some instances suffocation. The face is flushed, and the pulse quick and irritated, great restlessness and anxiety. The child tosses about the bed, and will not remain in one position, nor can its complaints, in any way be appeased. It whines, and cries and frets, and seems to be very uneasy, without suffering any positive pain. Such cases, very likely depend on spasm, and terminate fatally, if relief is not afforded, but if relieved will probably return the next night.

But sometimes the disease approaches more gradually. It is a hoarseness which is preceded up on coughing, and may continue without increase for even several days, & until the sudden application of some exciting cause, as a change in the



7
temperature of the air; exposure to cold and damp;
or an improper check of perspiration, calling forth
some of its more formidable symptoms, as difficult-
ty of breathing; an increase of cough without ex-
pectoration; an ⁱⁿcrease of ^{the} ^{secretion} of mucus, running
from nose and eyes; a hard and more ^{irritated} ^{cough}
cough than is usual, and various degrees of fever
which with the cough is almost ^{always} ^{is} ^{incubated} ^{at}
night, and especially after the child has slept.

When the two species are completely formed,
there is no material difference between them and
the progress is nearly similar. This last form
is longer running its course, than the one above
mentioned, as it is less obedient to the powers of
medicine. This Dr. Doan, thinks, "is doubtless re-
sulting to its first symptom, hoarseness, being neg-
lected; to obviate which, he emphatically ad-
vices parents to be on their guard, whenever the
symptom may take place, he having found



it, from long experience, to be one of a most dangerous, and threatening character, and when it is immediately opposed by active remedies, this formidable complaint has been stopped, in limine, on many instances. "It is true" he says "a hoarse rattle passes off, sometimes, without much mischief, but this is not the hoarseness of croup, for this," he believes, "never takes its leave spontaneously;" He therefore lays down the following rules, by which we may distinguish them, viz. "that there is a certain clearness and distinctness, in the croupy sound, that does not attend the other; the one (the croupy) seeming as if it issued from a metallic instrument; and the other from a less vibrating material. The ear, however, by long habit, may learn to distinguish them; and when once instructed in this discrimination, never loses its tact;" and, "that the wannessent hoarseness is almost always accompanied by a little soreness



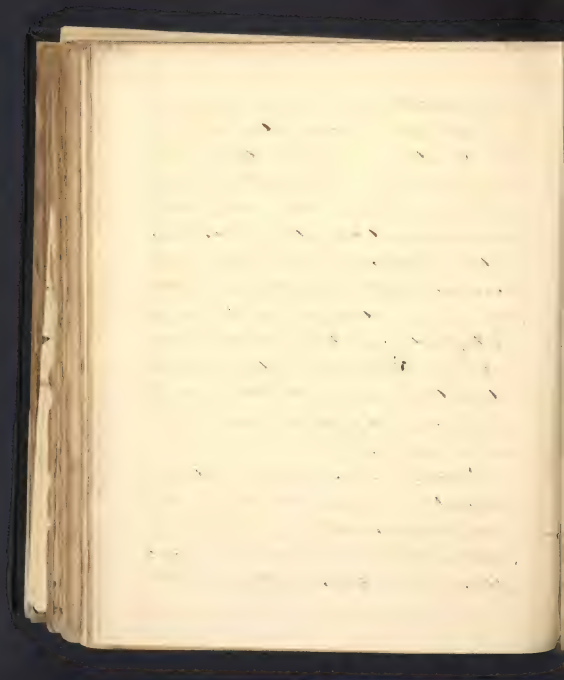
of throat; while that of croup," he believes, "never is" again, "the first is perceived in common speaking; whereas that of Croup is only discernable, in the commencement by coughing;" and lastly, "Some little pain and soreness are observed about the posterior fauces, after coughing, in the one, which never happens in the other." Still he advises, "that whenever Hoarseness takes place, not to trust too much to the discriminating powers of the ear, for its nature; but instantly proceed upon the supposition, that it may be of a dangerous kind. He also observes in a note, "that it may be remarked, as a general rule, that when the voice becomes suddenly affected by Hoarseness, which discovers itself in speaking, and without being so in coughing, it is not the Hoarseness of Croup. This kind of Hoarseness, however, is more common to adults, than to children.

Diagnosis is very easy. It may be distinguished



Even acute asthma, by the peculiar, ringing, cough,
the Croup the pulse is strong and even high,
coloured, and the voice small and small, when
as in acute asthma, the pulse although some-
times quick, as a pulse, the voice is hoarse, the
voice croaking and deep. It may be distinguis-
hed from L. Sarys by the absence of phre-
ses; uneasy sensation in the larynx; exemption
from the cough and peculiar intonation of Croup,
by the period of age at which it occurs - the
first being incident to childhood - the latter to
advanced age - painful deglutition - sensitiv-
ity of the Larynx; and pulmonary increasing diffi-
culty of breathing.

Prognosis. By pursuing a proper and vigor-
ous practice, we may arrest it in its early stage;
but if it continues, and the lungs become inflamed
it is dangerous. The most remarkable symp-
toms are, the medicines operating well, particu-



warm, the tremors; the breathing becoming more
easy; loose cough, remission of fever; and the
pulse becoming natural; but if these should
not happen, we have a weak pulse; pale counten-
-ance; swelling of the shoulders; and the head
thumping hard, and thrown forward against
the ribs. These two last symptoms, Prof. P. says,
mean, however very dangerous and the child
seldom recovers from them.

Dissections are various according to the stage
of the complaint; the violence of the attack, and
the treatment pursued. The trachea is general-
ly inflamed, sometimes extending down to the ex-
-tremities of the bronchia into the substance of the
lungs. Sometimes we find the lungs so cut with
blood, and so solid as to resemble the substance
of the Liver, called *infarctation of the Lungs*.

Sometimes a membrane is found covering the tra-
-chea extending from below the Larynx to the bron-

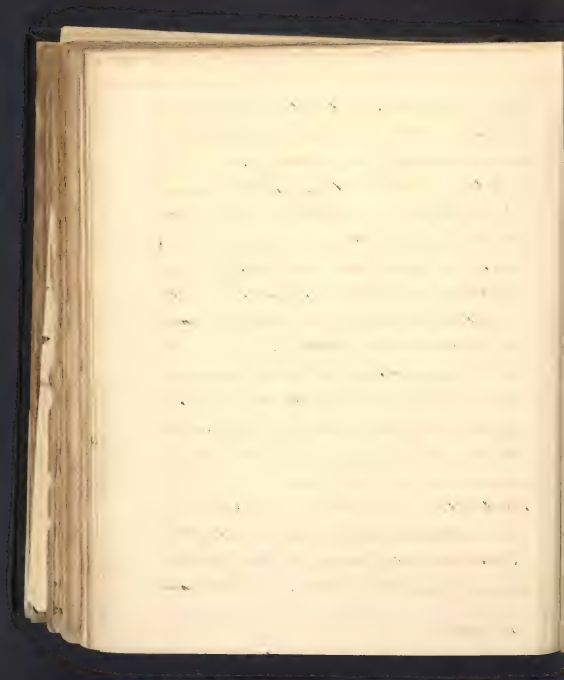


-cheat examinations and Dr. C. says, that
he has seen it cut in them. The existence of
this membrane has been denied by some declar-
ing it to be nothing but suppurated mucous.

Professor Chapman says, that he has never met
with it, having observed nothing more than slight
traces of inflammation, with more or less of tumour.

That such a membrane does exist, I have not
the least doubt as we have the testimony of some
of the most respectable practitioners as Dr. C. Huf-
sch, H. Brown, and Francis. Nothing is more com-
mon, than to see growth, poured out from vessels in
a certain state of action and forming adhesions, or
solidified membranes, an example of the latter of
which, we have in this disease.

Treatment. From what we have said, it will
be evident, that nothing but the most active
medicines can arrest the progress of this formidable
disease. In the first instant we observe the case



for sound, we should inflame the external throat
by the operation of the Symp. Simpington, and soon
a mustel and sanguis; and in aid of these ex-
ternal applications, we may direct in doses suit-
able to the age of the patient. The compound
syrup of "Quinids", or "2^d brand" thin syrup, as an
emollient and antispasmodic, in small doses as an ex-
pectorant, &c. is Prof. Dr. Chapman prescribes the
"oil. Antimony", given at short intervals, and if
this should not remove old spasm, not "cure"
union, he says seldom fails. I have seen several
cases, in which the thin syrup was administered
with the most decided advantage. When the En-
do is operating, Dr. Chapman advises the patient to
be put into a warm bath for 10 or 15 minutes.
"It rarely fails to prevent the operation of the Endo
is, and will sometimes alone cure the disease."

The Emollient however not operating, or if after its
operation, the patient is not relieved, blood appears



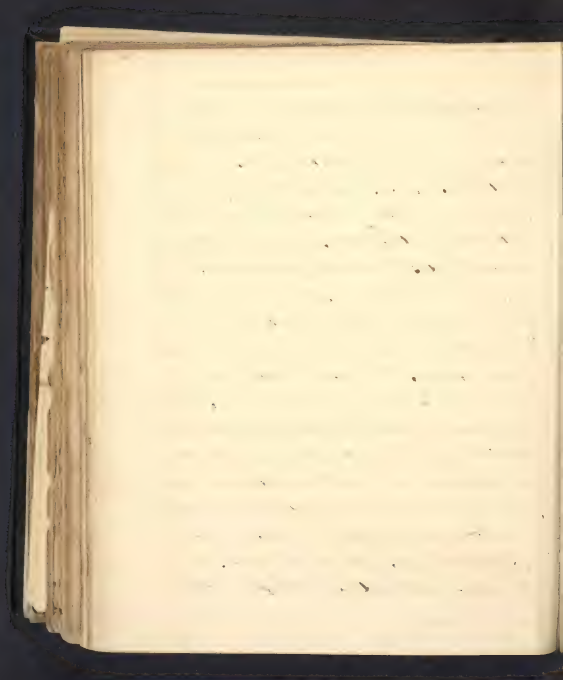
be and repeat, together with the warm bath.

The attack must be very sudden & it is not unusual. If the signs of bleeding are then commenced of this disease I quote the following from Boissier. "When bleeding is used on the commencement of the violent symptoms, the relief is often immediate. and I have scarcely believed, that I saw the same child, breathing softly, who, ten minutes before, lay gasping and convulsed."

The application of bleeding however must be governed by circumstances; for blood we must, in some cases, draw and again, if the system reacts with force, and the pulse be found of definite contraction."* Now the life it will occasionally sustain us, with little or no abatement; and under these circumstances, we should resort to topical depletion, by leeches or the cups. The cups should be applied to the sides or back of the neck.

The leeches are preferred by Dr. Boissier. Boissier

* Vide Boissier on Chorea.



highly expected to be "Dont. Duces," he having given
 us in a single instance, seen them do good but
 in a number of cases seen them do harm", because
 1.st it employs considerable time: knowing which, the
 patient is obliged to maintain an uneasy position
 and this may be extremely unbecomable to his
 friends. 2.nd It often becomes important that the
 quantity of blood to be drawn, should be exactly
 determined: this cannot be done in leeching - es-
 pecially, as the after bleeding is sometimes very
 considerable, in spite of every attempt to arrest it,
 to the manifest injury of the patient. 3.rd Their
 salivary, and the sudden exposure of the throat,
 after having been warmly covered, is often times so
 very disagreeable, that the bad symptoms can be seen
 to increase during the operation; and are almost
 sure to follow, immediately after.

After having applied the cups or leeches, a sinapiem
 or blister should be put over the throat, if it has



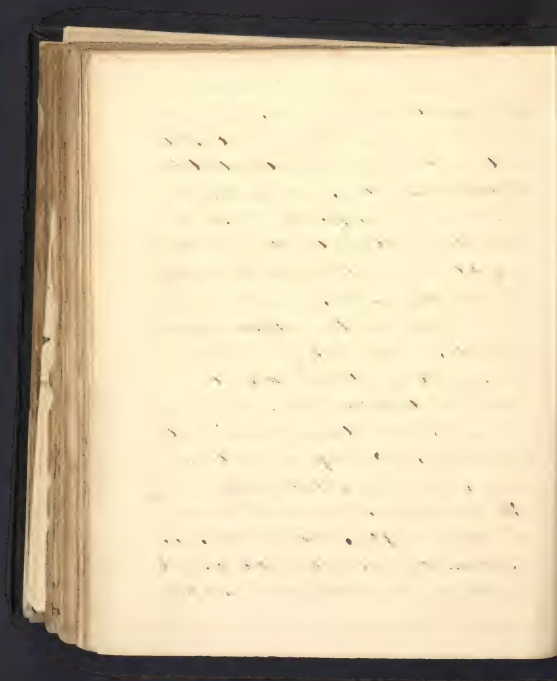
not been afforded before. "The vomiting, trismus, &c. &c.
symptoms, becoming so alarmingly violent, as to de-
mand immediate relief, we should bleed at the
Torus Arteri, and this, once induced, seldom
fails to awaken the susceptibility of the stomach
to the action of emetics, and effecting all that can
be expected from the most, free and active, emetics.

The morbid syncope takes place, the Trismus
ceases, impeded respiration, and pain disappear.

This extensive mode of bleeding, we are told, was
first suggested by Doct. Dick of Alexandria.

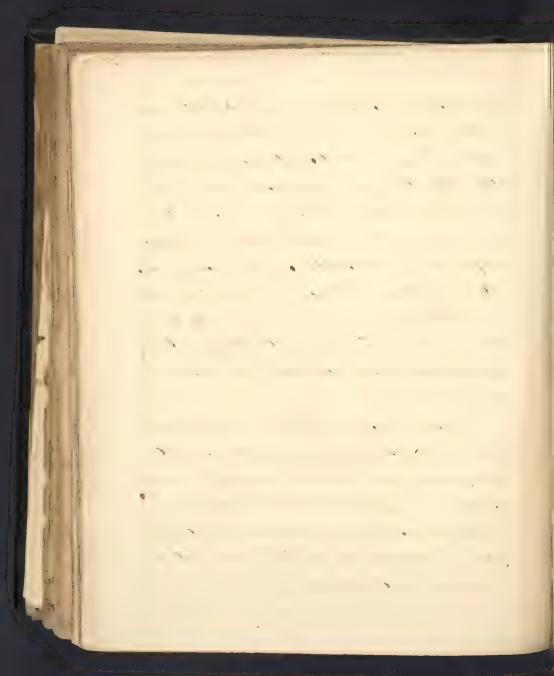
The small and repeated bleedings, which some
advise, in this case would prove of no avail, and
to use the words of Prof. Chapman, "would be a
pernicious abuse of an important remedy."

He lays it down as a general rule, to which,
there are a few exceptions, that in acute diseases
where hemorrhage is at all demanded, it should
be in the commencement so copious, as to pro-



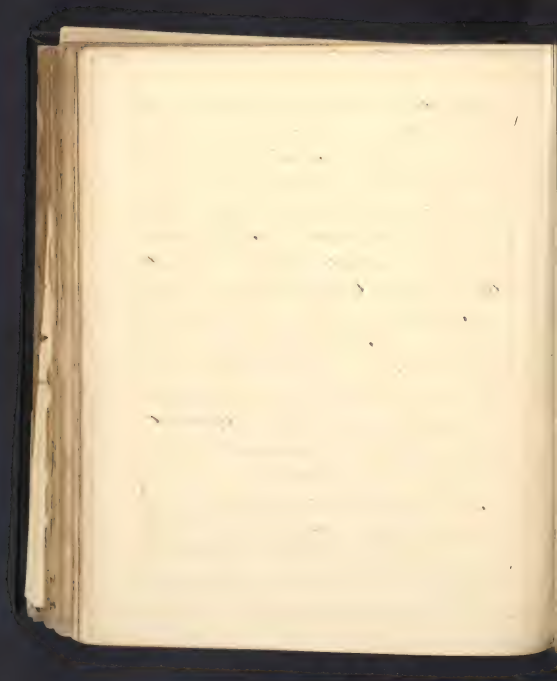
duce decisive effects. He also says that, "detraction
of blood in a small or large quantity, equal dis-
tinction. The former abates action only, while the
latter alters it, or so far reduces it, as to enable
the natural energies of the system to subvert, or
overcome it, and to establish health." Of this prin-
ciple, we have illustrations in pleurisy, in fever,
and many other affections, when a small pro-
fuse bleeding, having occurred to, arrests the
progress of the case. Even if debility should be
apprehended, we should bethink if the case is not
opposed to a cure.

If disease thus become broken, which is known
by the abatement of the former symptoms, and
still more so by the restoration of the natural sus-
ceptibility of the system to the action of medicines, we
soon administer calomel, not in small and repea-
ted doses, but in the largest possible doses, that it
may speedily and most safely purge.

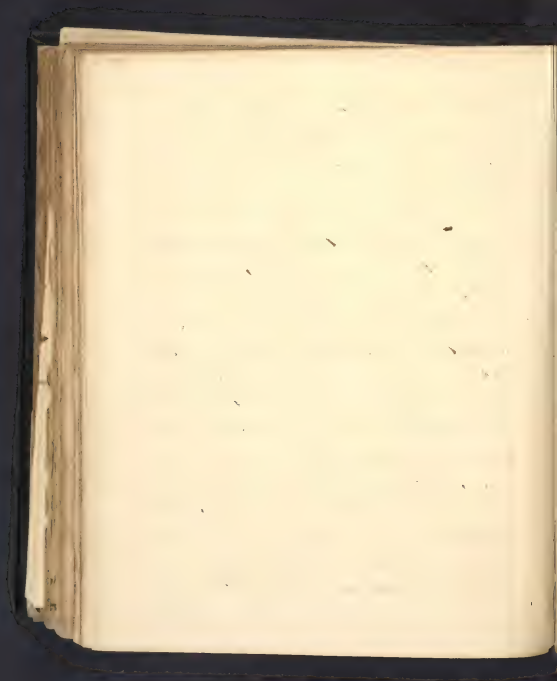


But should cough, hoarseness, with tightness of chest and difficulty of respiration remain, we may use the "Compound Symp of Spittle," or what is very good the *Polygona Serotina*. This last is spoken in very high terms of by P. Simpson in extolling it as the remedy of the disease. It was first introduced in the treatment of this disease by Doct. Achter of Maryland, who gave it unlimited praise. He used it in every form and stage of the disease, sometimes as an emetic and under other circumstances as an expectorant. It is now chiefly confined to the secondary or ultimate stage of this complaint, and chiefly as an expectorant. It is exceedingly useful to overcome hoarseness, and other sequelae of this disease.

The foregoing treatment relates to the forming and earlier stages of croup, while the intervention is confined pretty much to the upper portion of the trachea, and consist either in a spasmotic



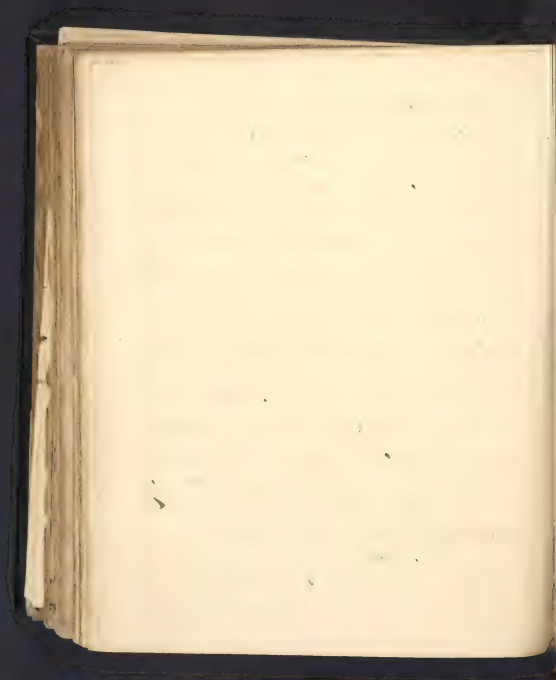
injection of the Glottis, or inflammation of the membranous lining of the Larynx. But continuing ten or fifteen hours, it extends to the bronchia into the substance of the Lungs, producing a state of pneumonia or phlogia, or an enlarged state of the pulmonary vessels with blood. The symptoms are as we described. All the manifestations of an interrupted, and defective circulation exist. The lungs implicitly receive their office. The countenance is mottled, the cheeks hectic, the eyes prominent and inflamed. The pupils are widely dilated, countenance insipid, wild, haggard, and ghost-like; respiration laborious; full and distended pulse; or the chest swelling under the disease. has its breathing more tranquil, with a weak or irregular circulation. The symptoms in these states of the lungs are so analogous, that it is not easy to identify a diagnosis; but it is necessary in the treatment with care. It may be



distinguished from that state of the lungs in Bron-
-chitis, especially of that form of it, which accom-
-panies Catarrhus suffocatus by the latter ha-
-ving had its origin in caloric; also a greater
or less discharge from the lungs, or at least evi-
dence of heavy accumulations of matter, with
an inability to throw it up; the pulse is large
and the surface is cold and clammy.

But when occasioned by sanguineous con-
-gestion, however oppressive the dyspnea may
be, there is little or no cough, or pituitous dis-
-charge, and what is more distinctive, an
absence of the Whizzing, so generally a symp-
-tom of Bronchitis. The respiration is, however,
singularly hurried, panting and laborious.
The pulse too is full, though irregular, and
distended, tho' very readily compressible.

Cases of this sort, occur in Florida and pithie
children & the weak and sedentary.

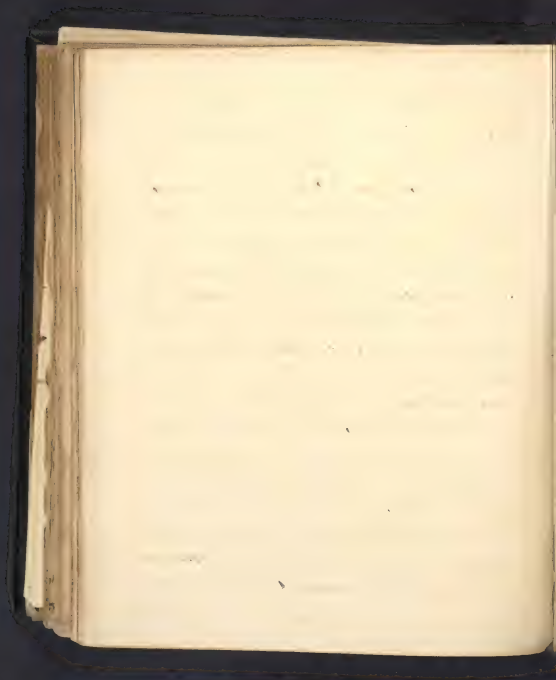


The indication, therefore, in the treatment of this case, is to relieve the lungs of oppression, and to establish a free and equable circulation.

To effect this purpose, Prof. Chapman directs sanguine vomiting, by an active and stimulating draught, while the mind is in a warm bath.

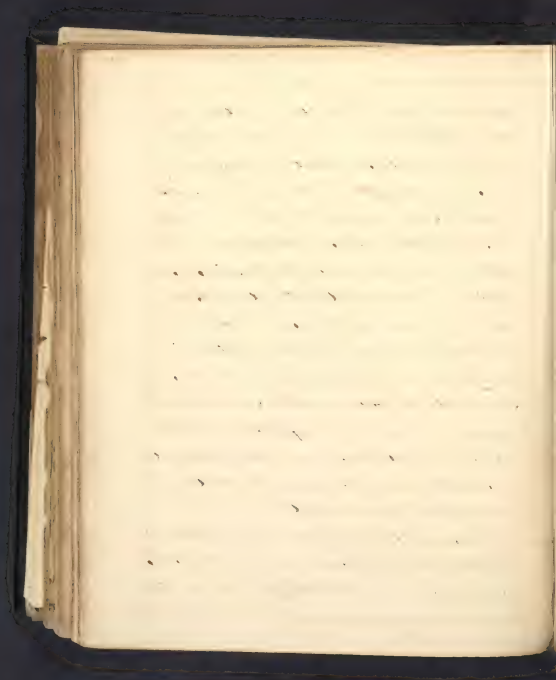
The comp. Tinct. is recommended by some, but I am disposed to think that when active vomiting is demanded, nothing will answer the purpose so well as Tinct. Cast. with Infusum Spicacaulis. The Tinct. of Sassa, is either in doses of a teaspoonful is very good.

We are to be cautious, however, in this case, as we may by a single large bleeding sink the patient. Therefore we should deplete small and repeated quantities, observing the effect on the stagnant blood, watching the effect on the system. When the blood is foetid, and looks may be used in its stead, which should be



applied to the breast. The Rules should be followed by a blister applied on the breast, and in the case is very urgent, as to admit of no delay, some means of more prompt respiration, may be resorted to, as stricks, wringing out in hot water &c. it is possible still better pldgts. I have dipped in a decoction of hellebore made with the spirit of turpentine. The subsequent treatment consists principally of the use of expectorants, the best of which is the "compound syrup of squills," an antimonial wine, the extract, vinegar of squills, decoctions of Senega root, either alone or combined with substance of Opium. Much may be expected from the liberal use of balsam. It is a very active expectorant. At Hamilton, we in fact gave one hundred grains in barely four hours to a child.

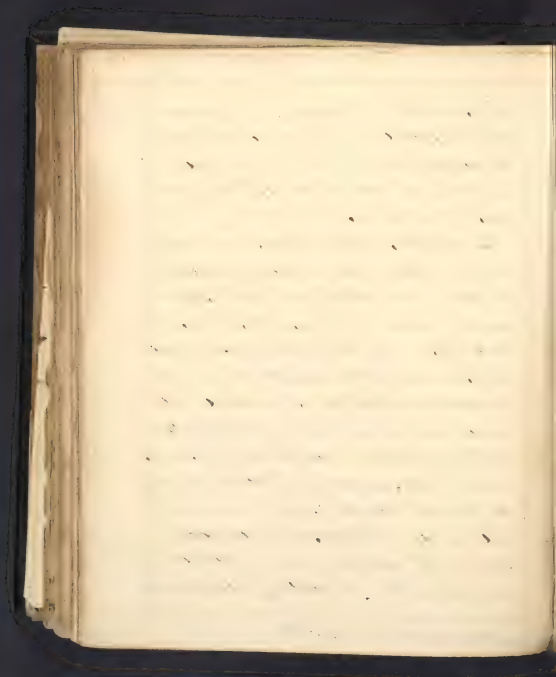
In degree not yielding to the foregoing treatment the top of the inflamed surface, alone themselves, in an "Abscess of squarish lymph," forming a dis-



-lens membrane. This stage is one of great dan-
-ger to the patient, since we cannot with out-
-ly get rid of the membrane, & if we could, we
cannot change but rarely the disposition of the
parts, to form new ones.

The indications, therefore are, 1st to remove this
membrane, and 2^d after removal, to prevent the
formation of more. 1st The membrane has been re-
moved by Smiles. It* Quercus states the case of a
child of his, in whom the membrane was removed
by this means; but the disposition to form new
ones still remaining, it was repeated, and
proved fatal. Several cases are related by Dr. Ho-
-sack,* which came under the care of Dr. Davis
in which Smiles proved very effectual in removing
it. Since the situation is purely mechanical,
that remedy, which gives the most sudden
& look to the respective organs, would bid fair
not to succeed, hence the utility of pretty powerful

* See appendix to Thomas's Practice.



Emetics. This all practitioners agree to, but some
 variety of opinion exists, as to the proper substance
 for this purpose. In the cases related, by Dr. Wroack
 the tartaric Emetic as Sulphate of Zinc, and Sulphate
 of Copper, were used. Dr. Davies relies on the Poly-
 ala Seneca, with more confidence than any other
 of the Emetic substances. He gives it in the fol-
 lowing form. "Take Half an ounce of powdered Seneca,
 pour on it Half a pint of boiling water, and let it
 simmer until nearly Half reduced; strain it care-
 fully, and give a tea-spoonful every fifteen or twen-
 ty minutes, until it ^{works} ~~works~~. This quantity will an-
 swer for a child from one to three years old - for one
 of greater age, two tea-spoons full at a time may
 be given. This medicine he says is apt to run off
 by the bowels, when exhibited thus strong; therefore
 a quantity of landanum should be given from time
 to time, say two or three drops every two or three hours.
 He thinks, that he has seen evident relief in a

case from the Stts. of Laryngitis. Several drops were
given every hour, but the patient died.

We are told that a late German writer strongly
recommends active stimulations, to produce
sneezing. Lastly, Tracheotomy has been per-
-ed, and performed, generally without success,
and the reason is very obvious, for by the operation
we only remove the present obstructing cause, and
do not remove the disposition of the parts to form
more. It has been said that the failure was owing
to our performing the operation too late; and therefore
it has been advised to be performed earlier in the dis-
ease. This practice might prove successful, but
few practitioners, I think would be willing to perform
it.

